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TECH CENTER 1600/2900



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RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/806,368E

TIME: 15:28:19

Input Set : A:\1962-4066.ST25.txt

Output Set: N:\CRF4\09182002\I806368E.raw

ENTERED

3 <110> APPLICANT: Hoechst Marion Russel
 4 KATSUURA, MIEKO
 5 KIMURA, MICHIO
 7 <120> TITLE OF INVENTION: BONE MORPHOGENETIC PROTEIN ANTAGONIST BASED ON THE MATURE
 8 PROTEIN
 10 <130> FILE REFERENCE: 447.001
 12 <140> CURRENT APPLICATION NUMBER: US 09/806,368E
 C--> 13 <141> CURRENT FILING DATE: 2002-09-10
 15 <150> PRIOR APPLICATION NUMBER: PCT/IB99/01621
 16 <151> PRIOR FILING DATE: 1999-10-04
 18 <150> PRIOR APPLICATION NUMBER: JP 10/288,103
 19 <151> PRIOR FILING DATE: 1998-10-09
 21 <160> NUMBER OF SEQ ID NOS: 7
 23 <170> SOFTWARE: PatentIn version 3.1
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 119
 27 <212> TYPE: PRT
 28 <213> ORGANISM: Homo sapiens
 30 <220> FEATURE:
 31 <221> NAME/KEY: CHAIN
 32 <222> LOCATION: (1)..(119)
 33 <223> OTHER INFORMATION: Mature MP52
 36 <300> PUBLICATION INFORMATION:
 37 <302> TITLE: NOVEL PROTEIN AND PROCESS FOR PRODUCING THE SAME
 W--> 38 <309> DATABASE ENTRY DATE:
 39 <310> PATENT DOC NO: WO9633215
 40 <311> PATENT FILING DATE: 1996-04-19
 41 <312> PUBLICATION DATE: 1996-10-24
 42 <313> RELEVANT RESIDUES: (1)..(119)
 44 <400> SEQUENCE: 1
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 47 1 5 10 15
 50 Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
 51 20 25 30
 54 Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
 55 35 40 45
 58 Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
 59 50 55 60
 62 Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
 63 65 70 75 80
 66 Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
 67 85 90 95
 70 Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val

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84 <221> NAME/KEY: CHAIN
85 <222> LOCATION: (1)..(114)
86 <223> OTHER INFORMATION: Mature BMP-2
89 <300> PUBLICATION INFORMATION:
90 <302> TITLE: NOVEL OSTEOINDUCTIVE COMPOSITIONS
W--> 91 <309> DATABASE ENTRY DATE:
92 <310> PATENT DOC NO: WO8800205
93 <311> PATENT FILING DATE: 1987-06-30
94 <312> PUBLICATION DATE: 1988-01-14
95 <313> RELEVANT RESIDUES: (1)..(114)
97 <400> SEQUENCE: 2
99 Gln Ala Lys His Lys Gln Arg Lys Arg Leu Lys Ser Ser Cys Lys Arg
100 1          5          10          15
103 His Pro Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn Asp Trp Ile
104          20          25          30
107 Val Ala Pro Pro Gly Tyr His Ala Phe Tyr Cys His Gly Glu Cys Pro
108          35          40          45
111 Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
112          50          55          60
115 Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val
116 65          70          75          80
119 Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu Asn Glu
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127 Cys Arg
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138 <222> LOCATION: (1)..(116)
139 <223> OTHER INFORMATION: Mature BMP-4
142 <300> PUBLICATION INFORMATION:
143 <301> AUTHORS: Wozney, JM et al.
144 <302> TITLE: NOVEL REGULATORS OF BONE FORMATION MOLECULAR CLONES AND
145 ACTIVITIES
146 <303> JOURNAL: SCIENCE
147 <304> VOLUME: 242
148 <305> ISSUE: 4885

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TIME: 15:28:19

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149 <306> PAGES: 1528-1534

150 <307> DATE: 1988-12-16

151 <308> DATABASE ACCESSION NO: GENBANK/M22490

152 <309> DATABASE ENTRY DATE: 1994-10-31

154 <400> SEQUENCE: 3

156 Ser Pro Lys His His Ser Gln Arg Ala Arg Lys Lys Asn Lys Asn Cys

157 1 5 10 15

160 Arg Arg His Ser Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn Asp

161 20 25 30

164 Trp Ile Val Ala Pro Pro Gly Tyr Gln Ala Phe Tyr Cys His Gly Asp

165 35 40 45

168 Cys Pro Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile

169 50 55 60

172 Val Gln Thr Leu Val Asn Ser Val Asn Ser Ser Ile Pro Lys Ala Cys

173 65 70 75 80

176 Cys Val Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu

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180 Tyr Asp Lys Val Val Leu Lys Asn Tyr Gln Glu Met Val Val Glu Gly

181 100 105 110

184 Cys Gly Cys Arg

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188 <210> SEQ ID NO: 4

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195 <222> LOCATION: (1)..(139)

196 <223> OTHER INFORMATION: Mature BMP-7

199 <300> PUBLICATION INFORMATION:

200 <301> AUTHORS: OZKAYNAK, E. et al.

201 <302> TITLE: OP-1 cDNA encodes an osteogenic protein in the TGF-beta.

202 <303> JOURNAL: EMBO J.

203 <304> VOLUME: 9

204 <305> ISSUE: 7

205 <306> PAGES: 2085-2093

206 <307> DATE: 1990-07-01

207 <308> DATABASE ACCESSION NO: EMBL/ X51801

208 <309> DATABASE ENTRY DATE: 1994-10-31

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213 1 5 10 15

216 Asn Gln Glu Ala Leu Arg Met Ala Asn Val Ala Glu Asn Ser Ser Ser

217 20 25 30

220 Asp Gln Arg Gln Ala Cys Lys Lys His Glu Leu Tyr Val Ser Phe Arg

221 35 40 45

224 Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala Pro Glu Gly Tyr Ala Ala

225 50 55 60

228 Tyr Tyr Cys Glu Gly Glu Cys Ala Phe Pro Leu Asn Ser Tyr Met Asn

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229 65          70          75          80
232 Ala Thr Asn His Ala Ile Val Gln Thr Leu Val His Phe Ile Asn Pro
233          85          90          95
236 Glu Thr Val Pro Lys Pro Cys Cys Ala Pro Thr Gln Leu Asn Ala Ile
237          100          105          110
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251 <213> ORGANISM: Homo sapiens
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254 <221> NAME/KEY: CHAIN
255 <222> LOCATION: (1)..(119)
256 <223> OTHER INFORMATION: Mature MP52 protein. Note : 30th, 71st, 74th and 111th Met
257 are modified to Met sulfoxide.
260 <400> SEQUENCE: 5
262 Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala
263 1          5          10          15
266 Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
267          20          25          30
270 Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
271          35          40          45
274 Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
275          50          55          60
278 Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
279 65          70          75          80
282 Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
283          85          90          95
286 Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val
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294 <210> SEQ ID NO: 6
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297 <213> ORGANISM: Homo sapiens
299 <220> FEATURE:
300 <221> NAME/KEY: CHAIN
301 <222> LOCATION: (1)..(119)
302 <223> OTHER INFORMATION: Mature MP52 protein. Note : 30th and/or 71st and/or 74th
303 and/or 111th Met are modified to s-carboxymethyl Met.
305 <220> FEATURE:
306 <221> NAME/KEY: CHAIN
307 <222> LOCATION: (1)..(119)
308 <223> OTHER INFORMATION: Mature MP52 protein. Note : 30th and/or 71st and/or 74th
309 and/or 111th Met are modified to s-carboxymethyl Met.

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Output Set: N:\CRF4\09182002\I806368E.raw

311 <400> SEQUENCE: 6

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313 Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala
314 1          5          10          15
317 Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
318          20          25          30
321 Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
322          35          40          45
325 Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
326          50          55          60
329 Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
330 65          70          75          80
333 Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
334          85          90          95
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338          100          105          110
341 Val Glu Ser Cys Gly Cys Arg
342          115

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346 <211> LENGTH: 119

347 <212> TYPE: PRT

348 <213> ORGANISM: Homo sapiens

350 <220> FEATURE:

351 <221> NAME/KEY: CHAIN

352 <222> LOCATION: (1)..(119)

353 <223> OTHER INFORMATION: Mature MP52 protein. Note :32nd and 35th Trp are modified
 354 to allylsulphenyl Trp.

357 <400> SEQUENCE: 7

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359 Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala
360 1          5          10          15
363 Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
364          20          25          30
367 Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
368          35          40          45
371 Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
372          50          55          60
375 Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
376 65          70          75          80
379 Pro Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
380          85          90          95
383 Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val
384          100          105          110
387 Val Glu Ser Cys Gly Cys Arg
388          115

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VERIFICATION SUMMARY

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TIME: 15:28:20

Input Set : A:\1962-4066.ST25.txt

Output Set: N:\CRF4\09182002\I806368E.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:38 M:286 W: Invalid Database Entry: Valid Formats YYYY-MM-DD or Mon-YYYY, SEQ ID:1

L:91 M:286 W: Invalid Database Entry: Valid Formats YYYY-MM-DD or Mon-YYYY, SEQ ID:2

STATISTICS SUMMARY

DATE: 09/18/2002

PATENT APPLICATION: US/09/806,368E

TIME: 15:28:20

Input Set : A:\1962-4066.ST25.txt

Output Set: N:\CRF4\09182002\I806368E.raw

Application Serial Number: US/09/806,368E

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 09-10-2002

Art Unit: OIPE

Software Application: PatentIN3.1

Total Number of Sequences: 7

Total Nucleotides: 0

Total Amino Acids: 845

Number of Errors: 0

Number of Warnings: 2

Number of Corrections: 1

MESSAGE SUMMARY

271 C: 1 (Current Filing Date differs)

286 W: 2 (Invalid Database Entry: Valid Formats YYYY-MM-DD or Mon-YYYY)

